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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/505,139	03/23/2005	Neil Alexander Keron	003604-7	1682

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EXAMINER

LEE, JONG SUK

ART UNIT PAPER NUMBER

3673

DATE MAILED: 12/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/505,139

Applicant(s)

KERON, NEIL ALEXANDER

Examiner

Jong-Suk (James) Lee

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 10, 11, 14-17, 20-23 and 31 is/are rejected.
- 7) ☒ Claim(s) 6-9, 12, 13, 18, 19 and 24-30 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/23/05.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

1. The preliminary amendment filed August 19, 2004 has been entered.
2. The substitute specification filed August 19, 2004 has not been entered because it does not conform to 37 CFR 1.125(b) and (c) because: the marked-up copy has not been provided although Applicant mentioned the marked-up version was attached in the remarks of the above mentioned preliminary amendment.
3. Claim 22, drawn to a semi-submersible, floating production storage and offloading system has been treated as an independent claim as a shorthand form.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-5, 10, 11, 14-17 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over British Patent Application publication (GB 2,216,849 A) in view of Blanchard et al (US 5,899,637).

British Patent Application Publication '849 discloses an arrangement for the storing of oil including a oil production vessel having a deck structure (10), two underwater pontoons (12) for

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providing buoyancy to the deck structure and a plurality of columns (11) connecting the deck structure to the pontoons, the arrangement comprising a oil storage tank being attached below the pontoons in lower portion of the tank, the tank being subdivided into four rooms/vertical chambers (28-31) each having a bulkhead, the chambers of the tank including a first inlet/outlet conduit located proximate to the bottom of the chamber and a second inlet/outlet conduit located at the top of the chamber within the upper 20% of the chamber or at the top of the chamber or equal to one fifth of the height of the chamber, pumps (32, 33) for discharging oil to a tanker, a first plurality of the chambers being arranged with the second inlet/outlet conduit of the plurality of chambers connecting to the first inlet/outlet conduit of the next chambers in the cascade as depicted in Fig. 7, an atmospherically vented break tank/pressure/vacuum relief valve (48) for maintaining the internal pressure lower than the external pressure (see pg.8, last paragraph to pg.9, first paragraph) , an inherent ballast pump for supplying or emptying surrounding sea water (see pg.1, last paragraph to pg.2, first paragraph) (see Figs. 1-7; pg. 1 to pg.11).

However, British Patent Application Publication '849 fails to disclose or fairly suggest the oil tank being made from concrete material. Blanchard et al discloses an offshore production and storage tank with a barge/pontoon structure, the tank (63) comprising a plurality of valves with conduits, the conduits (75, 76) being located at the top and bottom portion of the oil storage tanks, the tank being coated with concrete as depicted in Figs, 4-5 (see col.2, lines 32-52).

Therefore, in view of Blanchard et al, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the oil storage tank by adding concrete coated layer to the tank in order to enhance the reinforcement for the tank which is located submerged in the water.

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With respect to a diffuser, an artisan within the ordinary skill in the art would have installed such a conventional diffuser to the oil tank system in order to provide better mixing fluid within the chamber.

6. Claims 23 and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over British Biewer (US 3,880,102) in view of Blanchard et al (US 5,899,637).

Biewer discloses a method and apparatus for offshore submersible oil storage and drilling, the method comprising the steps of attaching to the bottom of a pontoon structure/floater (38) a tank, which is subdivided into a plurality of chambers (80, 84), filling the chambers with at least one fluid to adjust the buoyancy of the production facility, and displacing said fluid from the chambers by pumping produced oil thereinto in a controlled fashion such that the mass of the tank and its contents is maintained substantially constant as depicted in Figs. 5 and 10 (see Figs. 1-12; col.4, line 1-68; col.5, lines 1-68; col.6, lines 1-48).

However, Biewer fails to disclose or fairly suggest the oil tank being made from concrete material. Blanchard et al discloses an offshore production and storage tank with a barge/pontoon structure, the tank (63) comprising a plurality of valves with conduits, the conduits (75, 76) being located at the top and bottom portion of the oil storage tanks, the tank being coated with concrete as depicted in Figs. 4-5 (see col.2, lines 32-52).

Therefore, in view of Blanchard et al, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Biewer's oil storage tank by adding concrete coated layer to the tank in order to enhance the reinforcement for the tank which is located submerged in the water.

With respect to the method step of partially filling each chamber of the tank with gas for reducing the total mass of the tank, an artisan within the ordinary skill in the art would have controlled the filling process of the oil storage tank with partially filling the chamber with gas by controlling valves while in operation for the oil storage tank in order to control the ballast of the vessel.

Allowable Subject Matter

7. Claims 6-9, 12, 13, 18-19 and 24-30 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Other reference cited disclose a semi-submersible loading mooring and storage facility, a floating island for extracting or processing gas and an immersion of a offshore weight-structure having two compartments.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jong-Suk (James) Lee whose telephone number is (571) 272-7044. The examiner can normally be reached on 6:30 am to 3:00 pm, Monday thru Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Heather C. Shackelford can be reached on (571) 272-7049. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jong-Suk (James) Lee
Primary Examiner
Art Unit 3673

/jjl

December 2, 2005